

### 3.1 ENGINE DESCRIPTION

All of the models incorporate the O. H. C. design, driven from the left side of the engine by a light-weight endless chain. This provides the engine with high speed and high power output due to the elimination of the reciprocating movements and mechanical losses, and reduction in weight. Further the chain is always maintained in a constant tension by the oil pressure and spring operated automatic tensioner to assure quiet operation and precise valve timing at all speeds.

The lubrication system utilizes a trochoid type oil pump driven through the cam chain guide sprocket to provide lubrication under pressure to all of the primary moving parts of the engine and in conjunction, a screen and a centrifugal filter are incorporated in the system to assure that only highly purified oil is circulated within the engine to minimize the parts wear and attributing to the extended engine life.

(Fig. 3.1)

### 3.2 POWER TRANSMISSION SYSTEM

The energy produced by the combustion of the fuel mixture in the cylinder is applied to the top of the piston, this is transmitted to connecting rod → clutch drive plate → clutch outer → friction disc → clutch center → primary drive gear → primary driven gear → transmission main shaft → main shaft gear → counter shaft gear → counter shaft → drive sprocket → drive chain → driven sprocket → to the rear wheel, progressively in succession. (Fig. 3.2)

### 3.3 ENGINE REMOVAL

S 90, CL 90, CL 90 L, CD 90

1. Remove the step bar.
2. Remove the muffler.
3. Remove the left crankcase rear cover and unhook the drive chain from the sprocket.

(Fig. 3.3)

#### NOTE:

Tie a piece of wire to both ends of the chain to prevent the ends from being drawn into the chain case. This will facilitate the work during engine installation. (S 90, CD 90)

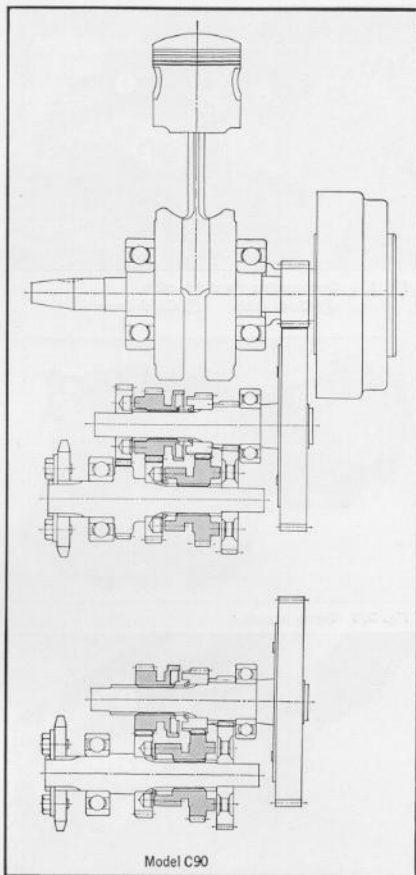


Fig. 3.2 Power transmission diagram

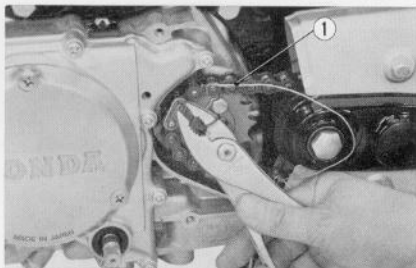


Fig. 3.3 Removing the drive chain  
① Drive chain